Effect of Yogic Exercises on Motor Fitness and Psychological Variables of School Children

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Introduction

Human body and mind are possibly, the greatest wonders in the universe, except the partially understood Universe itself. With functions and faculties as varied as imagination, intuition, logical reasoning, empathy, and sense of colour, beauty and rhythm, human mind is unique in this Universe.

Human body is on the same lines as the human mind. Capable of so many thinks, one among them which is movements. Humans can walk, run, dive, jump, climb and perform gravity defying stunts. The human brain is behind such complex functions. Human mind and body go hand in hand in order to enable movements of human body parts.

Importance of Yogic Exercises

Mankind's greatest treasure is good health and its virtues. Good health is what holds the path to success. To promote and restore good health man has devised many state of the art techniques related to physicality that lay way to muscular formations. These developments take the basal help and guidance from exercises that are mechanical in nature. Such exercises lead to quick muscular movements that in turn engage the heart and lungs to function at their highest potential. In doing so man is drained of his energy and exhaustion occurs leading to good sleep.

Human body is a miracle of nature, it is a complex system that makes the human body that is bones, muscles, tendons, entire system go hand in hand for optimum functioning. All

these internal movements are balanced and optimized by the help of yogic exercises, which are tender, uniform and help in the conservation of energy.

The muscular system of the human body is one such system that needs constant motion and movement to function properly not giving it proper exercises leads to stagnation and decreases of flexibility giving the person a flabby body. Yogic exercises increases the flexibility and tones down the human body keeping the person agile and fit.

Yoga is a tradition method of meditation developed by the saints of ancient India. They practiced yoga as an effective method of controlling their mind and bodily activities. Yoga in daily Life is a system of practice consisting of eight levels of development in the areas of physical, mental, social and spiritual health. When the body is physically healthy, the mind is clear, focused and stress is under control. This gives the space to connect with loved ones and maintain socially healthy relationships. When we are healthy we are in touch with inner Self, with others and surroundings on a much deeper level, which adds to spiritual health. Yoga increases the flexibility of the spine, improves body's physical condition and heightened awareness to the importance of relaxation. It has been emphasized that each exercise be practiced slowly, coordinating movement with the breath, pausing motionless in each position and always with full concentration.

Benefits of Yoga

- The Reduction of stress and tension.
- Optimum levels of energy.
- Higher Flexibility.
- Weight loss.
- Normal blood pressure.
- Sound sleep.
- Increased concentration and Cognitive development.
- Increased levels of strength and endurance.
- Improve concentration and mental focus.
- Improves Cardiovascular endurance.
- Sleep improves.
- Memory improves.
- Balance improves.

Statement of the Problem

The Purpose of the study is to find out the **"Effect of Yogic Exercises on Motor Fitness and Psychological Variables of School Children".**

Objectives of the Study

- To assess the impact of Yogic exercise on selected Motor Fitness and Psychological Variables.

- To find out the Effect of Yogic Exercises training on Motor Fitness variables of the Subjects.
- To study the Effect of Yogic Exercises training on Psychological variables of the Subjects.

Delimitations of the Study

- The present study will be delimited to 80 subjects.
- The study will be delimited to the age group ranging from 12 to 16 years.
- The subjects will be randomly assigned into two groups of forty each (n=80). Group I known as Experimental group underwent yogic exercises training and Group II acted as Control group who did not undergo any special training Programme.
- The training schedule is delimited to 16 weeks.
- The following Motor Fitness variables Agility, Balance, Power and Reaction time.
- The following Psychological variables Stress and Anxiety will be selected for the study.
- The following Asanas will be selected for the study Padmasana, Vajrasana, Paschimottanasana, Tadasana, Vrikshasana, Garudasana, Trikonasana, Shavasana, Naukasana, Halasana, Sarvangasana, Chakrasana, Makarasana, Bhujanagasana, Dhanurasana and Shalabhasana.

Limitations of the Study

- The food habits, life style and climatic condition taken into consideration of the limitation of the study.
- The performance of the subjects expected as limitation.
- The measurement taken into consideration of geographical condition as limitation of the study.
- Motor fitness variables such as Agility, Balance, Coordination, Power and Reaction time will be considered as the limitation for the study

Hypothesis

It is hypothesized that the Yogic Exercises Training improves the Following Motor Fitness and Psychological Variables.

- It is hypothesized that 16 weeks Yogic Exercises training develops Agility.
- It is hypothesized that 16 weeks Yogic Exercises training develops Balance.
- It is hypothesized that 16 weeks Yogic Exercises training develops Power.
- It is hypothesized that 16 weeks Yogic Exercises training develops Reaction time.
- It is hypothesized that 16 weeks Yogic Exercises training develops Stress and anxiety.

Significance of the Study

- The study will helps to coaches and the Physical Education teachers to develop the motor fitness variables.
- The study as significant in most of the important their motor fitness of the subjects.
- The study is helps to improve Agility, Balance, Power and Reaction time etc.
- This study provides useful and productive suggestions for the enhancement of Psychological variables among of the subjects

Definition of the terms

Yoga

An ancient practice that originated in India. This practice integrates mind, body, and spirit to promote health and well-being.

Asanas

Asanas is a state of being, and by definition there could be thousands of probable states, which one can achieve. Pathanjali has defined asana ‘Sthir Sukha Asanam’ that is ‘Asana means steady and comfortable posture’.

Agility

The ability to quickly and accurately change the direction of the movement of the entire body in space. In game such as tennis, agility is important to reach the ball in time.

Balance

The ability to maintain equilibrium while moving or stationary. Activities such as gymnastics, ballet, and skiing require balance.

REVIEW OF RELATED LITERATURE

The Researcher has made sincere Efforts to collect the literature Related to this study and found some References to similar studies which have been reviewed are produced in this chapter**.**

The related literature reviewed for better understanding of the problem and to interpret the results systematically, they are presented in this chapter.

Manimakalai and Chitra (2011) studied the effect of yogasanas practice on flexibility among university women. Thirty healthy, untrained female subjects were selected from Annamalai University in various departments and their age ranged from 18 to 25 years. The subjects were divided into two groups namely the control and the experimental group. The experimental group underwent selected asanas for five days per week for eight weeks. Control group did not undergo any training programme rather than their routine work. Flexibility was measured by using sit and reach box. Prior to and after end of practice period all subjects were tested. The results of pre-test and post-test were compared with using Analysis of Co-variance. Finding of flexibility shows significant improvement due to the eight weeks yogic practice when compared to the control group.

Tran, Holly, et. al., (2001), had conducted a study on the Effect of hatha yoga practice elicited improvement on the Health – Related aspects of physical Fitness. Ten healthy, untrained volunteers (nine female and one male), ranging in age from 18-27 years, were tested on muscular strength and endurance, flexibility, cardio respiratory fitness, body composition and pulmonary functions. Training was given two days in a week for a period of eight weeks. It was found out that regular hatha yoga can elicit improvement in the health – related aspects of physical fitness.

John Walsakom, evaluated the response of selected asanas on balance, flexibility, muscular endurance and reaction time among school boys. Thirty healthy, untrained school boys were selected from kalapet in Pondicherry and their age ranged from 10 to 15 years. The subjects were equally divided into two groups namely control and experimental group. The experimental group underwent selected asanas practice for one hour duration for ten weeks. Balance was measured using by stoke stand, flexibility was measured with the reliable equipment sit and reach box. Muscular endurance was measured using by bent knee sit ups

and reaction time was measured using by nelson hand stick. The results of pre- test and post-test were compared by using Analysis of Covariance (ANCOVA). The results revealed that Balance, flexibility, muscular endurance variables were significantly improved after practice of asanas.

Madanmohan et.al, assessed the effect of yoga training on reaction time, respiratory endurance and muscular strength. Twenty seven male medical students were randomly selected from Jawaharlal institute of postgraduate medical education and research in Pondicherry and their aged from 18 to 21 years. They were given yoga training on 12 weeks of 30 minute for six days. Muscular strength was measured using by hand grip dynamometer. The results of pre- test and post- test were compared by using t ratio test. There was significant improvement on reaction time, respiratory endurance and muscular strength among male students after the intervention.

Preetha, conducted a study to find out the effect of selected yogasanas and aerobic exercises on selected physical, physiological and psychological variables among women students of Pondicherry University. Samples were selected randomly aged between 20 to 25 years and was divided into equally three groups Control and two experimental groups. Experimental group I underwent aerobic exercises, experimental group II underwent yogasana practice the both group the training session were held five days in a week for a period of twelve weeks .Control group did not undergo any training. Prior to and at the end of training period all subject were tested for selected physical, physiological and psychological variables. Aerobic exercises & yoga practice group showed significant improvement on selected physical, physiological and psychological variables like weight, flexibility, and balance among experimental group than the control group.

Chidambara Raja, studied the effect of yogic practice and physical fitness on flexibility, anxiety and blood pressure. Forty five subjects working women in various faculties of Annamalai University in the age group of 35 to 40 years were selected. They were divided into three equal groups each group consisted of fifteen subjects. Group I underwent yoga practice, group II underwent physical exercise and group III acted as control group who did not participate in any special training. The training period for this study was five days in a week for eight weeks. Flexibility was measured using by sit and reach test, anxiety was measured by Taylor's Manifest Anxiety scale and blood pressure was measured using sphygmanometer. Prior to and after the training period the subjects were tested flexibility,

anxiety and blood pressure (systolic and diastolic). The data were computed statistically by using “Analysis of Co- Variance” (ANCOVA). All the variables were significantly improved among experimental group than the control group,

Amutha, (2010) conducted a study to find out the effect of selected yogic exercise and pranayama on anxiety, VO2max and flexibility. For this purpose fifty male students were selected from various high and higher secondary schools in and around Chidamabaram town. They were divided into two equal groups. One as experimental group doing underwent training for nine weeks, weekly five days, monday to friday between 6.00 a.m. to 8.00 a.m.. Control group (n=25) did not participate in any special training. The result of the study indicated that the anxiety was reduced significantly, maximal oxygen uptake and the flexibility increased significantly for the training group. It was concluded that the yogic exercise had reduced the anxiety and increased the maximal oxygen uptake and flexibility.

METHODOLOGY

The Present study is related to the selection of subjects, selection of variables, selection of tests, Experimental Design, Orientation of the subjects.

Selection of Subjects

The Purpose of the study is to find out the **"Effect of Yogic Exercises on Motor Fitness and Psychological Variables of School Children".**To achieve this purpose 80 Subjects in the age group ranging from 12 to 16 years studying in V.B. Darbar high school Vijayapura Karnataka state will be selected randomly as subjects were divided into two equal group of forty each known as Experimental group and Control group.

Selection of Variables

- Independent Variables
- Dependent Variables

Independent Variables

- **Sitting Asanas** - Padmasana, Vajrasana, Vakrasana, Paschimottanasana.
- **Standing Asanas** -Tadasana, Vrikshasana, Garudasana,Trikoasana.
- **Supine Asanas** - Shavasana, Naukasana, Halasana, Sarvangasana,Chakrasana.
- **Proline Asanas** - Makarasana, Bhujanagasana,Dhanurasana, Shalabhasana

Dependent Variables

Motor Fitness Variables

- Agility
- Balance
- Power
- Reaction time

Psychological Variables

- Stress
- Anxiety

Experimental Design

The selected subjects will be divided into two equal groups of 80 subjects, out of which one was Experimental Group and a control Group. Experimental group underwent the yogic exercises training. The training period of an Experimental group will be 16 weeks 6 days per week for duration of 60 minutes. Control group did not undergo any training rather than their routine work.

Selection of Tests

Motor Fitness Variables

Sl. No	Test Items	Variables	Measurement
1	Burpee test	Agility	Three trails were given and the best trail will be recorded as the score.
2	Stork Balance stand test	Balance	The total time in seconds is recorded
3	Standing Broad jump	Power	The assistant uses the longest recorded distance to assess the subject leg Power and strength
4	The Nelson hand Reaction test	Reaction time	When the subject caught the scale, the score will be read just above the upper edge of the thumb in centimeters. The score of the subjects were average of ten trails.

Psychological Variables

Sl. No	Test Items	Tools	Criterion measures
1	Stress	Questionnaire developed by Z.Akthar	There are 51 items in the student stress scale and each has been provided with 5 options, which are Always, often, sometimes, rarely and never. these five options have been scored in order to get a mathematical result from the test. The five point rating scale has been followed and hence starting from never to always score is given from 1-5. So that the strength of the indicator i.e. its high occurrence is shown by a large sum and

			vice – versa. There are some negative items which have been scored from never up to always which is given 5-1 .The maximum score on student stress scale would be 255 and minimum 51 Therefore, the range of student scale is 51-255.
2	Anxiety	Questionnaire developed by A.K.Singh	The maximum possible score of this test is 20. In Anxiety Scale for children, each item of the test is scored as either +1 or 0. There are two types of items – positive and negative. All positive items which are endorsed by the subjects as 'yes' and all negative items No, 4,9,16, and 18 which are endorsed by the subjects as 'No' are given a score of +1. A score of zero is awarded to all other answers. Thus, high score on the test indicates high anxiety and low score on the test indicates low academic anxiety.

Orientation of the Subjects

The investigator explained the purpose of the study and the importance of the training programme to the subjects in order to get their co - operation as well as to secure reliable data. A few days will be spent to teach various Yogic Exercises involved in the training prior to the commencement of the training programme.

Collection of Data

The Researcher wanted to know the Effect of yogic Exercises on Motor Fitness and Psychological Variables development. For the purpose of the study the researcher selected 80 subjects for the study. Pre test will be administered and recorded. Then the Researcher will be given 16 weeks training on yogic exercises. The post test will be administrated soon after the 16 weeks training. The Researcher compared the pre and post test Results.

Statistical Techniques

The data will be gathered from two groups Motor Fitness and Psychological Variables to find out the improvement in the variables by giving 16 weeks of yogic exercises training the statistical procedures which will be used to find out the significant development of Motor Fitness and Psychological Variables performance between the two groups. by using analysis of covariance (ANCOVA) procedure. The statistical procedure will be carried out by using SPSS, 15.0 Packages.